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NIEBAUER, RONALD T	
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/792,376	SABETSKY, VLADIMIR	
	Examiner	Art Unit	
	RONALD T. NIEBAUER	1654	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *30 December 2009*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *27-37,41 and 43-51* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *27-37,41,43-51* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 5/13/09 has been entered.

Applicants amendments and arguments filed 5/13/09 are acknowledged and have been fully considered. Any rejection and/or objection not specifically addressed is herein withdrawn.

Previously (11/3/06) applicant elected Group II with traverse. Due to applicants amendments an additional restriction requirement (election of species) was mailed 8/5/09.

Applicant's election of recombinant human insulin in the reply filed on 12/30/09 is acknowledged. Because applicant did not distinctly and specifically point out the supposed errors in the restriction requirement, the election has been treated as an election without traverse (MPEP § 818.03(a)).

As discussed below, the elected species was found in or obviated by the prior art. In accord with section 803.02 of the MPEP, the claims have been examined fully with respect to the elected species but the search has not been unnecessarily extended to all species. Any art that was found in the course of searching for the elected species that reads on non-elected species is also cited herein. As such, claims 27-37,41,43-51 are under consideration.

Claims 1-26,38-40,42 have been cancelled.

Claims 27-37,41,43-51 are under consideration.

Claim Objections

Applicant is advised that should claim 48 be found allowable, claim 50 will be objected to under 37 CFR 1.75 as being a substantial duplicate thereof. Applicant is advised that should claim 49 be found allowable, claim 51 will be objected to under 37 CFR 1.75 as being a substantial duplicate thereof. When two claims in an application are duplicates or else are so close in content that they both cover the same thing, despite a slight difference in wording, it is proper after allowing one claim to object to the other as being a substantial duplicate of the allowed claim. See MPEP § 706.03(k). In the instant case, claims 48 and 50 are identically worded. In the instant case, claims 49 and 51 are identically worded.

Claim Rejections - 35 USC § 112

Claims were previously rejected under 112 2nd. These 112 2nd rejections are new rejections.

The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 27-37,41,43-51 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claims 43-45 and dependent claims 27-37,41,47,49,51 recite 'recombinant'. The specification (page 26 section 0070) defines recombinant to refer to 'combinatorial library of molecules which may be further processed into another state'. The metes and bounds of the

claims are unclear. Section 2111.01 IV of the MPEP states that applicant may be their own lexicographer but should set forth definitions with clarity, deliberateness, and precision. In the instant case, the definition of recombinant is unclear. The art recognizes recombinant production of a protein to be production of that particular protein. However, the specification definition refers to further processing. Since the specification definition refers to further processing into another state, the structure of the recombinant molecule is unclear. For example, it is unclear if recombinant human insulin must have the structure of human insulin or if the structure can be modified.

Claims 43-45 refer to 'therapeutically effective amount'. Section 2173.05(c)III of the MPEP states: "The phrase "an effective amount" has been held to be indefinite when the claim fails to state the function which is to be achieved and more than one effect can be implied from the specification or the relevant art. In re Fredericksen 213 F.2d 547, 102 USPQ 35 (CCPA 1954)." In the instant case, the claims fail to state the function and more than one effect can be implied. In particular the instant specification (section 0055) states that 'therapeutically effective' amounts can be determined in reference to injuries or disorders being treated. However, it is unclear what injury would be treated with insulin and it is unclear what would be a therapeutically effective amount of insulin to treat an injury. Although the art recognizes the use of insulin for treating diabetes, for example, one would not recognize diabetes as an injury, The dependent claims do not clarify the meaning.

Claim 27 recites 'substantially no covalent bonds'. The term 'substantially' in claim 27 is a relative term which renders the claim indefinite. The term 'substantially' is not defined by the claim, the specification does not provide a standard for ascertaining the requisite degree, and one

of ordinary skill in the art would not be reasonably apprised of the scope of the invention. In the instant case the term 'substantially' is used to describe covalent bonds. Covalent bonds are either present or not present. There is no evidence of record that covalent bonds can be partially present. As such, it is unclear how to differentiate a substantial covalent bonds from an insubstantial covalent bond.

Claim 44 and dependent claims recite 'wherein the insulin is permeated in the pores'. The meaning of such phrase in the context of the instant claims is unclear. It is unclear if the intent is to recite the claim in a product-by-process format or if the intent is to define the structure of the composition. In the instant case the claims recite 'permeated in the pores' as opposed to 'in the pores'. It is unclear how to distinguish a composition with insulin permeated in the pores. It is unclear what the word 'permeated' adds to the claim.

Although unclear (see 112 2nd) the term recombinant insulin has been interpreted such that the insulin is required to be some form of insulin. Any amount has been interpreted as an effective amount. The term substantially has been given the broadest reasonable interpretation such that bonds can either be present or not be present. The phrase 'insulin is permeated' has been interpreted as a product-by-process step. The claims have been interpreted such that they include no new matter.

Claim Rejections - 35 USC § 102

Claims were previously rejected under 102. Since the claims have been amended updated rejections appear below.

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 27-29,35,41,43-45,47,49,51 are rejected under 35 U.S.C. 102(b) as being anticipated by Schroder (Methods in Enzymology 1985 as cited in IDS 4/21/04).

Schroder teach (page 123 row 1) a composition comprising insulin and crystallized carbohydrate spheres (CCS) which is made from a solution of dextran T10. Thus Schroder teach the components (i.e. insulin and crystallized dextran microparticles) as recited in independent claims 43-45 of the instant invention. Schroder teach that the term crystallization is meant to include hydrogen, and van der Waals interactions, for example (page 119) as recited in claim 27 of the instant invention. Schroder teach aqueous solutions (page 121 last paragraph first sentence, page 122 first paragraph of release studies) as recited in claim 28 of the instant invention. Schroder teach administration via injection (Figure 3 and page 124 last paragraph), so a vessel (such as a syringe) and means is necessarily required thus meeting the limitations recited in claims 29,35 of the instant invention.

Although unclear (see 112 2nd) the term recombinant insulin has been interpreted such that the insulin is required to be some form of insulin since the definition (section 0070) refers to processing to another state. Although Schroder does not disclose the type of insulin, based on the interpretation of the definition provided for recombinant the insulin of Schroder meets the insulin limitations of claims 43-45,47,49,51. Any amount has been interpreted as an effective amount.

Further, the specification (section 0055) broadly defines effective amount. The term substantially has been given the broadest reasonable interpretation such that bonds can either be present or not be present. The phrase 'insulin is permeated' has been interpreted as a product-by-process step. The claims have been interpreted such that they include no new matter.

Claims 41,43, and 45, for example recite properties (porosity and microparticle diameter) that are not reported by Schroder. Please note, since the Office does not have the facilities for examining and comparing Applicants' composition with the composition of the prior art, the burden is on applicant to show a novel or unobvious difference between the claimed product and the product of the prior art. *See In re Best*, 562 F.2d 1252, 195 USPQ 430 (CCPA 1977) and *In re Fitzgerald*, 619 F.2d 67, 205 USPQ 594 (CCPA 1980), and "as a practical matter, the Patent Office is not equipped to manufacture products by the myriad of processes put before it and then obtain prior art products and make physical comparisons therewith." *In re Brown*, 459 F.2d 531, 535, 173 USPQ 685, 688 (CCPA 1972). In the instant case, the claim product and prior art product are substantially identical in composition (i.e. comprise crystallized dextran and insulin) so a prima facie case of anticipation has been established (see MPEP section 2112.01 I).

Claim 43 recites that none of the insulin is encapsulated. The instant specification (section 0073) describes encapsulation as not acting as a shell. In the instant case, Schroder recognize pores in the polymer matrix (page 1173rd complete paragraph). Figure 1 (page 119) also shows that the crystalline polymer matrix has pores. Further, Schroder teach (Figure 2) that insulin is released over time. As such, the microparticles of Schroder do not act as shells since there are pores and the insulin is released over time.

Claims 44 and 45 refer to insulin in pores. In the instant case, Schroder recognize pores in the polymer matrix (page 1173rd complete paragraph). Figure 1 (page 119) also shows that the crystalline polymer matrix has pores. Further, Schroder teach (Figure 2) that insulin is released over time. Thus there is a reasonable basis that the claim limitations are met absence evidence to the contrary.

Claims 27-29,35,41,43-51 are rejected under 35 U.S.C. 102(b) as being anticipated by Schroder (Methods in Enzymology 1985 as cited in IDS 4/21/04) as evidenced by Medline (Medline entry from STN for 'Crystallized carbohydrate spheres for slow release and targeting', entered medline Nov 1 1985, 1 page) and Registry (Registry entry for 11061-68-0, entered Nov 16 1984, 1 page).

Schroder teach (page 123 row 1) a composition comprising insulin and crystallized carbohydrate spheres (CCS) which is made from a solution of dextran T10. Thus Schroder teach the components (i.e. insulin and crystallized dextran microparticles) as recited in independent claims 43-45 of the instant invention. Schroder teach that the term crystallization is meant to include hydrogen, and van der Waals interactions, for example (page 119) as recited in claim 27 of the instant invention. Schroder teach aqueous solutions (page 121 last paragraph first sentence, page 122 first paragraph of release studies) as recited in claim 28 of the instant invention. Schroder teach administration via injection (Figure 3 and page 124 last paragraph), so a vessel (such as a syringe) and means is necessarily required thus meeting the limitations recited in claims 29,35 of the instant invention.

Schroder teach insulin. The Medline entry for the Schroder article lists the number 11061-68-0 as the registry number of the insulin (last line). The registry entry for 11061-68-0 recites that the name is human insulin (line 3). As such, Schroder teach human insulin. Since the structure of insulin is the same regardless of whether it is isolated or synthesized the insulin limitations of claims 43-51 are met. In the instant case Medline and Registry are cited as evidence of the identity of the insulin.

Although unclear (see 112 2nd) the term recombinant insulin has been interpreted such that the insulin is required to be some form of insulin since the definition (section 0070) refers to processing to another state. Any amount has been interpreted as an effective amount. Further, the specification (section 0055) broadly defines effective amount. The term substantially has been given the broadest reasonable interpretation such that bonds can either be present or not be present. The phrase 'insulin is permeated' has been interpreted as a product-by-process step. The claims have been interpreted such that they include no new matter.

Claims 41,43, and 45, for example recite properties (porosity and microparticle diameter) that are not reported by Schroder. Please note, since the Office does not have the facilities for examining and comparing Applicants' composition with the composition of the prior art, the burden is on applicant to show a novel or unobvious difference between the claimed product and the product of the prior art. *See In re Best*, 562 F.2d 1252, 195 USPQ 430 (CCPA 1977) and *In re Fitzgerald*, 619 F.2d 67, 205 USPQ 594 (CCPA 1980), and "as a practical matter, the Patent Office is not equipped to manufacture products by the myriad of processes put before it and then obtain prior art products and make physical comparisons therewith." *In re Brown*, 459 F.2d 531, 535, 173 USPQ 685, 688 (CCPA 1972). In the instant case, the claim product and prior art

product are substantially identical in composition (i.e. comprise crystallized dextran and insulin) so a prima facie case of anticipation has been established (see MPEP section 2112.01 I).

Claim 43 recites that none of the insulin is encapsulated. The instant specification (section 0073) describes encapsulation as not acting as a shell. In the instant case, Schroder recognize pores in the polymer matrix (page 1173rd complete paragraph). Figure 1 (page 119) also shows that the crystalline polymer matrix has pores. Further, Schroder teach (Figure 2) that insulin is released over time. As such, the microparticles of Schroder do not act as shells since there are pores and the insulin is released over time.

Claims 44 and 45 refer to insulin in pores. In the instant case, Schroder recognize pores in the polymer matrix (page 1173rd complete paragraph). Figure 1 (page 119) also shows that the crystalline polymer matrix has pores. Further, Schroder teach (Figure 2) that insulin is released over time. Thus there is a reasonable basis that the claim limitations are met absence evidence to the contrary.

Claims 27-29,35,41,43-45,47,49,51 are rejected under 35 U.S.C. 102(b) as being anticipated by Schroder (US 4,713,249 as cited in IDS 4/21/04).

Schroder (the same author as cited above) teach compositions comprising dextran and insulin (claims 1,4,7). Schroder specifically teach the use of crystallized dextran (abstract, column 2 lines 54-58) which is defined to include hydrogen bonds as recited in claim 27 of the instant invention. Thus Schroder teach the components (i.e. insulin and crystallized dextran microparticles) as recited in independent claims 43-45 of the instant invention. Schroder teach in example 13 a specific dextran insulin composition. Schroder teach aqueous solutions (example

13) as recited in claim 28 of the instant invention. Schroder teach that release experiments were performed so a vessel and means is necessarily present (example 13) as recited in claims 29,35 of the instant invention. Schroder teach that insulin is released (example 13). Schroder teach sphere sizes within that of claim 41 of the instant invention (column 5 line 18-20).

Although unclear (see 112 2nd) the term recombinant insulin has been interpreted such that the insulin is required to be some form of insulin since the definition (section 0070) refers to processing to another state. Although Schroder does not disclose the type of insulin, based on the interpretation of the definition provided for recombinant the insulin of Schroder meets the insulin limitations of claims 43-45,47,49,51. Any amount has been interpreted as an effective amount. Further, the specification (section 0055) broadly defines effective amount. The term substantially has been given the broadest reasonable interpretation such that bonds can either be present or not be present. The phrase 'insulin is permeated' has been interpreted as a product-by-process step. The claims have been interpreted such that they include no new matter.

Claims 43, and 45, for example recite properties (porosity and microparticle diameter) that are not reported by Schroder. Please note, since the Office does not have the facilities for examining and comparing Applicants' composition with the composition of the prior art, the burden is on applicant to show a novel or unobvious difference between the claimed product and the product of the prior art. *See In re Best*, 562 F.2d 1252, 195 USPQ 430 (CCPA 1977) and *In re Fitzgerald*, 619 F.2d 67, 205 USPQ 594 (CCPA 1980), and "as a practical matter, the Patent Office is not equipped to manufacture products by the myriad of processes put before it and then obtain prior art products and make physical comparisons therewith." *In re Brown*, 459 F.2d 531, 535, 173 USPQ 685, 688 (CCPA 1972). In the instant case, the claim product and prior art

product are substantially identical in composition (i.e. comprise crystallized dextran and insulin) so a prima facie case of anticipation has been established (see MPEP section 2112.01 I).

Claim 43 recites that none of the insulin is encapsulated. The instant specification (section 0073) describes encapsulation as not acting as a shell. In the instant case, Schroder teach (column 2 line 14-17, example 13) release of insulin over time. As such, the microparticles of Schroder do not act as shells since there are pores and the insulin is released over time.

Claims 44 and 45 refer to insulin in pores. In the instant case, Schroder teach (column 2 line 14-17, example 13) release of insulin over time. Thus there is a reasonable basis that the claim limitations are met absence evidence to the contrary.

Response to Arguments 102

Since the claims have been amended, new rejections adapted to the claims are recited above. Applicants arguments will be considered to the extent that they apply to the current rejection and claim set.

Applicants argue (page 7-8) that a section of Schroder discloses pores but it is in reference to previous attempts.

Applicants argue that Figure 1b of Schroder does not show particles contained in pores open to the outside of the crystalline structure.

Applicants argue that Figure 2 of Schroder does not indicate that insulin is released from pores.

Applicants argue that Schroder teach entrapment and does not teach compositions wherein none of the insulin is encapsulated.

Applicants argue that Schroderpatent does not teach release over time.

Applicants argue that Schroderpatent teach enclosing and does not teach compositions wherein none of the insulin is encapsulated.

Applicant's arguments filed 5/13/09 have been fully considered but they are not persuasive.

Although Applicants argue (page 7-8) that a section of Schroder discloses pores but it is in reference to previous attempts, it is noted that the instant claims require dextran and insulin. Schroder teach such composition. Applicants have shown no evidence that the microparticles of Schroder have no pores. Section 2145 I of the MPEP states that arguments of counsel cannot take the place of evidence in the record. In the instant case, the prior art teach the same components, insulin and crystallized dextran, as in the instant claims. Since the Office does not have the facilities for examining and comparing Applicants' composition with the composition of the prior art, the burden is on applicant to show a novel or unobvious difference between the claimed product and the product of the prior art. In the instant case, since Schroder suggest pores in the prior art there is a reasonable basis that the microparticles of Schroder contain pores absence evidence to the contrary. Further, it is noted that the instant application (section 0074) teach that the methods of making are made by any suitable method. Since Schroder teach methods of making compositions comprising insulin and crystallized dextran, the products are necessarily the same absence evidence to the contrary (see MPEP section 2112.01). As such, there remains a sound basis that that the products of the prior art meet the limitations.

Although Applicants argue that Figure 1b of Schroder does not show particles contained in pores open to the outside of the crystalline structure, it appears that such feature does not appear in the claims. Figure 1b is a schematic and is not evidence that the prior art does not teach

the instant invention. Section 2145 I of the MPEP states that arguments of counsel cannot take the place of evidence in the record. In the instant case, the prior art teach the same components, insulin and crystallized dextran, as in the instant claims. Since the Office does not have the facilities for examining and comparing Applicants' composition with the composition of the prior art, the burden is on applicant to show a novel or unobvious difference between the claimed product and the product of the prior art. In the instant case, Schroder recognize that there are pores in the polymer matrix of certain microparticles (page 117 3rd complete paragraph). Further, Schroder teach (Figure 2) that insulin is released over time. As such, there is a reasonable basis that the claim limitations are met, absence evidence to the contrary.

Although Applicants argue that Figure 2 of Schroder does not indicate that insulin is released from pores, it is noted that it appears that applicants are referring to an unclaimed feature. Further, figure 2 expressly teach release of insulin. If it is not released from the pores, it is unclear where it would be released from. The basis for applicants assertion is unclear. In the instant case, the prior art teach the same components, insulin and crystallized dextran, as in the instant claims. Since the Office does not have the facilities for examining and comparing Applicants' composition with the composition of the prior art, the burden is on applicant to show a novel or unobvious difference between the claimed product and the product of the prior art.

Although Applicants argue that Schroder teach entrapment and does not teach compositions wherein none of the insulin is encapsulated, it is noted that the instant claims do not exclude entrapment and the claims expressly recite 'porous'. In the instant case, the claims recite 'porous'. With regards to encapsulation the instant specification (section 0073) describes encapsulation as not acting as a shell. In the instant case, Schroder recognize pores in the

polymer matrix (page 1173rd complete paragraph). Figure 1 (page 119) also shows that the crystalline polymer matrix has pores. Further, Schroder teach (Figure 2) that insulin is released over time. As such, the microparticles of Schroder do not act as shells since there are pores and the insulin is released over time. In comparison, an eggshell or other types of shells do not have pores sufficient for release over time. In other words to be encapsulated like that of a shell implies that there is no escape or release from the shell. Further, it is noted that the instant application (section 0074) teach that the methods of making are made by any suitable method. Since Schroder teach methods of making compositions comprising insulin and crystallized dextran, the products are necessarily the same absence evidence to the contrary (see MPEP section 2112.01). As such, there remains a sound basis that that the products of the prior art meet the limitations.

Although Applicants argue that Schroderpatent does not teach release over time, it is noted that applicants appear to refer to an unclaimed feature. Section 2145 I of the MPEP states that arguments of counsel cannot take the place of evidence in the record. In the instant case, the prior art teach the same components, insulin and crystallized dextran, as in the instant claims. Since the Office does not have the facilities for examining and comparing Applicants' composition with the composition of the prior art, the burden is on applicant to show a novel or unobvious difference between the claimed product and the product of the prior art. Further, it is noted that the instant application (section 0074) teach that the methods of making are made by any suitable method. Since Schroderpatent teach methods of making compositions comprising insulin and crystallized dextran (example 13), the products are necessarily the same absence

evidence to the contrary (see MPEP section 2112.01). As such, there remains a sound basis that that the products of the prior art meet the limitations.

Although Applicants argue that Schroderpatent teach enclosing and does not teach compositions wherein none of the insulin is encapsulated, it is noted that the instant claims expressly recite 'porous'. With regards to encapsulation the instant specification (section 0073) describes encapsulation as not acting as a shell. In comparison, an eggshell or other types of shells do not have pores sufficient for release over time. In other words to be encapsulated like that of a shell implies that there is no escape or release from the shell. Applicants assertion is not sufficient evidence to overcome the rejection. Further, it is noted that the instant application (section 0074) teach that the methods of making are made by any suitable method. Since Schroder teach methods of making compositions comprising insulin and crystallized dextran, the products are necessarily the same absence evidence to the contrary (see MPEP section 2112.01). As such, there remains a sound basis that that the products of the prior art meet the limitations.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 27-29,32-33,35,37,41,43-51 are rejected under 35 U.S.C. 103(a) as being unpatentable over Schroder (Methods in Enzymology 1985 as cited in IDS 4/21/04) and Moriyama (Journal of Controlled Release 1996 as cited in IDS 4/21/04).

Schroder teach (page 123 row 1) a composition comprising insulin and crystallized carbohydrate spheres (CCS) which is made from a solution of dextran T10.

Schroder does not expressly teach PEG as recited in claim 33 in the composition or a composition with a shell as recited in claims 32,37. Schroder does not specify the insulin type.

Moriyama teach (page 238 last paragraph) a solution of PEG and dextran with insulin as recited in instant claim 33. It is noted that in the embodiment of section 2.2 (page 238-239) and section 3.1 (page 240) that there is no cross-linking of the dextran. Moriyama teach that two-phase systems are useful for protein delivery (page 238 column 1). Moriyama teach that insulin will preferentially partition into the PEG phase (page 238 first full paragraph). Moriyama teach that the PEG-dextran two-phase system may exhibit degradation-controlled protein release and prevent drug diffusion (page 238 first column). Moriyama also teach that the compositions were placed in bags (page 239 section 2.5) thus the compositions were necessarily in a shell as recited in claims 32,37 of the instant invention.

Schroder also teach compositions for slow release and targeting (title), specifically with dextran and insulin. One would be motivated to additionally use PEG as taught by Moriyama since Moriyama teach that the PEG-dextran two-phase system may exhibit degradation-controlled protein release and prevent drug diffusion (page 238 first column). From the teachings of the references, it is apparent that one of ordinary skill in the art would have had a reasonable expectation of success in producing the claimed invention.

In the instant case, all the claimed elements were known in the prior art and one skilled in the art could have combined the elements as claimed by known methods with no change in their respective functions, and the combination would have yielded predictable results to one of

ordinary skill in the art at the time of the invention. In particular, one would have been motivated to combine the crystallized dextran-insulin composition of Schroder with the PEG component of the composition as taught by Moriyama. Since Moriyama teach that insulin will preferentially partition into the PEG phase (page 238 first full paragraph), the resulting composition meets the limitations of claim 33 of the instant invention. From the teachings of the references, it is apparent that one of ordinary skill in the art would have had a reasonable expectation of success in producing the claimed invention. Therefore, the invention as a whole was *prima facie* obvious to one of ordinary skill in the art at the time the invention was made, as evidenced by the references.

Taken together, Schroder teach (page 123 row 1) a composition comprising insulin and crystallized carbohydrate spheres (CCS) which is made from a solution of dextran T10. Thus Schroder teach the components (i.e. insulin and crystallized dextran microparticles) as recited in independent claims 43-45 of the instant invention. Schroder teach that the term crystallization is meant to include hydrogen, and van der Waals interactions, for example (page 119) as recited in claim 27 of the instant invention. Schroder teach aqueous solutions (page 121 last paragraph first sentence, page 122 first paragraph of release studies) as recited in claim 28 of the instant invention. Schroder teach administration via injection (Figure 3 and page 124 last paragraph), so a vessel (such as a syringe) and means is necessarily required thus meeting the limitations recited in claims 29,35 of the instant invention.

Although unclear (see 112 2nd) the term recombinant insulin has been interpreted such that the insulin is required to be some form of insulin since the definition (section 0070) refers to processing to another state. Although Schroder does not disclose the type of insulin, based on the

interpretation of the definition provided for recombinant the insulin of Schroder meets the insulin limitations of claims 43-45,47,49,51. Further, since Schroder teach applications for drug delivery and administration one would be motivated to use human insulin since it is well-known to be used to treat human disease such as diabetes thus meeting the insulin limitations recited in claims 43-51. It is noted that the source of human insulin does not alter the insulin sequence.Any amount has been interpreted as an effective amount. Further, the specification (section 0055) broadly defines effective amount. The term substantially has been given the broadest reasonable interpretation such that bonds can either be present or not be present. The phrase 'insulin is permeated' has been interpreted as a product-by-process step. The claims have been interpreted such that they include no new matter.

Claims 41,43, and 45, for example recite properties (porosity and microparticle diameter) that are not reported by Schroder. Please note, since the Office does not have the facilities for examining and comparing Applicants' composition with the composition of the prior art, the burden is on applicant to show a novel or unobvious difference between the claimed product and the product of the prior art. *See In re Best*, 562 F.2d 1252, 195 USPQ 430 (CCPA 1977) and *In re Fitzgerald*, 619 F.2d 67, 205 USPQ 594 (CCPA 1980), and "as a practical matter, the Patent Office is not equipped to manufacture products by the myriad of processes put before it and then obtain prior art products and make physical comparisons therewith." *In re Brown*, 459 F.2d 531, 535, 173 USPQ 685, 688 (CCPA 1972). In the instant case, the claim product and prior art product are substantially identical in composition (i.e. comprise crystallized dextran and insulin) so a prima facie case of anticipation has been established (see MPEP section 2112.01 I).

Claim 43 recites that none of the insulin is encapsulated. the instant specification (section 0073) describes encapsulation as not acting as a shell. In the instant case, Schroder recognize pores in the polymer matrix (page 1173rd complete paragraph). Figure 1 (page 119) also shows that the crystalline polymer matrix has pores. Further, Schroder teach (Figure 2) that insulin is released over time. As such, the microparticles of Schroder do not act as shells since there are pores and the insulin is released over time.

Claims 44 and 45 refer to insulin in pores. In the instant case, Schroder recognize pores in the polymer matrix (page 1173rd complete paragraph). Figure 1 (page 119) also shows that the crystalline polymer matrix has pores. Further, Schroder teach (Figure 2) that insulin is released over time. Thus there is a reasonable basis that the claim limitations are met absence evidence to the contrary.

Claims 27-29,32-33,35,37,41,43-51 are rejected under 35 U.S.C. 103(a) as being unpatentable over Schroder (Methods in Enzymology 1985 as cited in IDS 4/21/04) and Moriyama (Journal of Controlled Release 1996 as cited in IDS 4/21/04) and Medline (Medline entry from STN for 'Crystallized carbohydrate spheres for slow release and targeting', entered medline Nov 1 1985, 1 page) and Registry (Registry entry for 11061-68-0, entered Nov 16 1984, 1 page).

Schroder teach (page 123 row 1) a composition comprising insulin and crystallized carbohydrate spheres (CCS) which is made from a solution of dextran T10.

Schroder does not expressly teach PEG as recited in claim 33 in the composition or a composition with a shell as recited in claims 32,37.

Moriyama teach (page 238 last paragraph) a solution of PEG and dextran with insulin as recited in instant claim 33. It is noted that in the embodiment of section 2.2 (page 238-239) and section 3.1 (page 240) that there is no cross-linking of the dextran. Moriyama teach that two-phase systems are useful for protein delivery (page 238 column 1). Moriyama teach that insulin will preferentially partition into the PEG phase (page 238 first full paragraph). Moriyama teach that the PEG-dextran two-phase system may exhibit degradation-controlled protein release and prevent drug diffusion (page 238 first column). Moriyama also teach that the compositions were placed in bags (page 239 section 2.5) thus the compositions were necessarily in a shell as recited in claims 32,37 of the instant invention.

Schroder also teach compositions for slow release and targeting (title), specifically with dextran and insulin. One would be motivated to additionally use PEG as taught by Moriyama since Moriyama teach that the PEG-dextran two-phase system may exhibit degradation-controlled protein release and prevent drug diffusion (page 238 first column). From the teachings of the references, it is apparent that one of ordinary skill in the art would have had a reasonable expectation of success in producing the claimed invention.

In the instant case, all the claimed elements were known in the prior art and one skilled in the art could have combined the elements as claimed by known methods with no change in their respective functions, and the combination would have yielded predictable results to one of ordinary skill in the art at the time of the invention. In particular, one would have been motivated to combine the crystallized dextran-insulin composition of Schroder with the PEG component of

the composition as taught by Moriyama. Since Moriyama teach that insulin will preferentially partition into the PEG phase (page 238 first full paragraph), the resulting composition meets the limitations of claim 33 of the instant invention. From the teachings of the references, it is apparent that one of ordinary skill in the art would have had a reasonable expectation of success in producing the claimed invention. Therefore, the invention as a whole was *prima facie* obvious to one of ordinary skill in the art at the time the invention was made, as evidenced by the references.

Taken together, Schroder teach (page 123 row 1) a composition comprising insulin and crystallized carbohydrate spheres (CCS) which is made from a solution of dextran T10. Thus Schroder teach the components (i.e. insulin and crystallized dextran microparticles) as recited in independent claims 43-45 of the instant invention. Schroder teach that the term crystallization is meant to include hydrogen, and van der Waals interactions, for example (page 119) as recited in claim 27 of the instant invention. Schroder teach aqueous solutions (page 121 last paragraph first sentence, page 122 first paragraph of release studies) as recited in claim 28 of the instant invention. Schroder teach administration via injection (Figure 3 and page 124 last paragraph), so a vessel (such as a syringe) and means is necessarily required thus meeting the limitations recited in claims 29,35 of the instant invention.

Although unclear (see 112 2nd) the term recombinant insulin has been interpreted such that the insulin is required to be some form of insulin since the definition (section 0070) refers to processing to another state. Schroder teach insulin. The Medline entry for the Schroder article lists the number 11061-68-0 as the registry number of the insulin (last line). The registry entry for 11061-68-0 recites that the name is human insulin (line 3). As such, Schroder teach human

insulin. Since the structure of insulin is the same regardless of whether it is isolated or synthesized the insulin limitations of claims 43-51 are met. In the instant case Medline and Registry are cited as evidence of the identity of the insulin. It is noted that the source of human insulin does not alter the insulin sequence.Any amount has been interpreted as an effective amount. Further, the specification (section 0055) broadly defines effective amount. The term substantially has been given the broadest reasonable interpretation such that bonds can either be present or not be present. The phrase 'insulin is permeated' has been interpreted as a product-by-process step. The claims have been interpreted such that they include no new matter.

Claims 41,43, and 45, for example recite properties (porosity and microparticle diameter) that are not reported by Schroder. Please note, since the Office does not have the facilities for examining and comparing Applicants' composition with the composition of the prior art, the burden is on applicant to show a novel or unobvious difference between the claimed product and the product of the prior art. *See In re Best*, 562 F.2d 1252, 195 USPQ 430 (CCPA 1977) and *In re Fitzgerald*, 619 F.2d 67, 205 USPQ 594 (CCPA 1980), and "as a practical matter, the Patent Office is not equipped to manufacture products by the myriad of processes put before it and then obtain prior art products and make physical comparisons therewith." *In re Brown*, 459 F.2d 531, 535, 173 USPQ 685, 688 (CCPA 1972). In the instant case, the claim product and prior art product are substantially identical in composition (i.e. comprise crystallized dextran and insulin) so a prima facie case of anticipation has been established (see MPEP section 2112.01 I).

Claim 43 recites that none of the insulin is encapsulated. the instant specification (section 0073) describes encapsulation as not acting as a shell. In the instant case, Schroder recognize pores in the polymer matrix (page 1173rd complete paragraph). Figure 1 (page 119) also shows

that the crystalline polymer matrix has pores. Further, Schroder teach (Figure 2) that insulin is released over time. As such, the microparticles of Schroder do not act as shells since there are pores and the insulin is released over time.

Claims 44 and 45 refer to insulin in pores. In the instant case, Schroder recognize pores in the polymer matrix (page 1173rd complete paragraph). Figure 1 (page 119) also shows that the crystalline polymer matrix has pores. Further, Schroder teach (Figure 2) that insulin is released over time. Thus there is a reasonable basis that the claim limitations are met absence evidence to the contrary.

Claims 27-29,31,35-37,41,43-51 are rejected under 35 U.S.C. 103(a) as being unpatentable over Schroder (Methods in Enzymology 1985 as cited in IDS 4/21/04) and Ecanow (US 4,963,526 as cited 11/29/06).

Schroder teach (page 123 row 1) a composition comprising insulin and crystallized carbohydrate spheres (CCS) which is made from a solution of dextran T10.

Schroder does not expressly teach the composition in the form of tablets or capsules as in claims 31,36-37.

Ecanow also teach compositions comprising insulin (abstract, claim 1, for example). Ecanow teach that the compositions can be made in the form of tablets (claim 35) as recited in claims 31,36-37.

Since Schroder teach the composition for delivery one would be motivated to obtain the composition in various forms for delivery. From the teachings of the references, it is apparent

that one of ordinary skill in the art would have had a reasonable expectation of success in producing the claimed invention.

Taken together, Schroder teach (page 123 row 1) a composition comprising insulin and crystallized carbohydrate spheres (CCS) which is made from a solution of dextran T10. Thus Schroder teach the components (i.e. insulin and crystallized dextran microparticles) as recited in independent claims 43-45 of the instant invention. Schroder teach that the term crystallization is meant to include hydrogen, and van der Waals interactions, for example (page 119) as recited in claim 27 of the instant invention. Schroder teach aqueous solutions (page 121 last paragraph first sentence, page 122 first paragraph of release studies) as recited in claim 28 of the instant invention. Schroder teach administration via injection (Figure 3 and page 124 last paragraph), so a vessel (such as a syringe) and means is necessarily required thus meeting the limitations recited in claims 29,35 of the instant invention.

Although unclear (see 112 2nd) the term recombinant insulin has been interpreted such that the insulin is required to be some form of insulin since the definition (section 0070) refers to processing to another state. Although Schroder does not disclose the type of insulin, based on the interpretation of the definition provided for recombinant the insulin of Schroder meets the insulin limitations of claims 43-45,47,49,51. Further, since Schroder teach applications for drug delivery and administration one would be motivated to use human insulin since it is well-known to be used to treat human disease such as diabetes thus meeting the insulin limitations recited in claims 43-51. It is noted that the source of human insulin does not alter the insulin sequence.Any amount has been interpreted as an effective amount. Further, the specification (section 0055) broadly defines effective amount. The term substantially has been given the broadest reasonable

interpretation such that bonds can either be present or not be present. The phrase 'insulin is permeated' has been interpreted as a product-by-process step. The claims have been interpreted such that they include no new matter.

Claims 41,43, and 45, for example recite properties (porosity and microparticle diameter) that are not reported by Schroder. Please note, since the Office does not have the facilities for examining and comparing Applicants' composition with the composition of the prior art, the burden is on applicant to show a novel or unobvious difference between the claimed product and the product of the prior art. *See In re Best*, 562 F.2d 1252, 195 USPQ 430 (CCPA 1977) and *In re Fitzgerald*, 619 F.2d 67, 205 USPQ 594 (CCPA 1980), and "as a practical matter, the Patent Office is not equipped to manufacture products by the myriad of processes put before it and then obtain prior art products and make physical comparisons therewith." *In re Brown*, 459 F.2d 531, 535, 173 USPQ 685, 688 (CCPA 1972). In the instant case, the claim product and prior art product are substantially identical in composition (i.e. comprise crystallized dextran and insulin) so a prima facie case of anticipation has been established (see MPEP section 2112.01 I).

Claim 43 recites that none of the insulin is encapsulated. the instant specification (section 0073) describes encapsulation as not acting as a shell. In the instant case, Schroder recognize pores in the polymer matrix (page 1173rd complete paragraph). Figure 1 (page 119) also shows that the crystalline polymer matrix has pores. Further, Schroder teach (Figure 2) that insulin is released over time. As such, the microparticles of Schroder do not act as shells since there are pores and the insulin is released over time.

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Schroder does not expressly teach the composition in the form of tablets or capsules as in claims 31,36-37.

Ecanow also teach compositions comprising insulin (abstract, claim 1, for example). Ecanow teach that the compositions can be made in the form of tablets (claim 35) as recited in claims 31,36-37.

Since Schroder teach the composition for delivery one would be motivated to obtain the composition in various forms for delivery. From the teachings of the references, it is apparent that one of ordinary skill in the art would have had a reasonable expectation of success in producing the claimed invention.

Taken together, Schroder teach (page 123 row 1) a composition comprising insulin and crystallized carbohydrate spheres (CCS) which is made from a solution of dextran T10. Thus

Schroder teach the components (i.e. insulin and crystallized dextran microparticles) as recited in independent claims 43-45 of the instant invention. Schroder teach that the term crystallization is meant to include hydrogen, and van der Waals interactions, for example (page 119) as recited in claim 27 of the instant invention. Schroder teach aqueous solutions (page 121 last paragraph first sentence, page 122 first paragraph of release studies) as recited in claim 28 of the instant invention. Schroder teach administration via injection (Figure 3 and page 124 last paragraph), so a vessel (such as a syringe) and means is necessarily required thus meeting the limitations recited in claims 29,35 of the instant invention.

Although unclear (see 112 2nd) the term recombinant insulin has been interpreted such that the insulin is required to be some form of insulin since the definition (section 0070) refers to processing to another state. Schroder teach insulin. The Medline entry for the Schroder article lists the number 11061-68-0 as the registry number of the insulin (last line). The registry entry for 11061-68-0 recites that the name is human insulin (line 3). As such, Schroder teach human insulin. Since the structure of insulin is the same regardless of whether it is isolated or synthesized the insulin limitations of claims 43-51 are met. In the instant case Medline and Registry are cited as evidence of the identity of the insulin. It is noted that the source of human insulin does not alter the insulin sequence.Any amount has been interpreted as an effective amount. Further, the specification (section 0055) broadly defines effective amount. The term substantially has been given the broadest reasonable interpretation such that bonds can either be present or not be present. The phrase 'insulin is permeated' has been interpreted as a product-by-process step. The claims have been interpreted such that they include no new matter.

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Claim 43 recites that none of the insulin is encapsulated. the instant specification (section 0073) describes encapsulation as not acting as a shell. In the instant case, Schroder recognize pores in the polymer matrix (page 1173rd complete paragraph). Figure 1 (page 119) also shows that the crystalline polymer matrix has pores. Further, Schroder teach (Figure 2) that insulin is released over time. As such, the microparticles of Schroder do not act as shells since there are pores and the insulin is released over time.

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Claims 27-30,34-35,41,43-51 are rejected under 35 U.S.C. 103(a) as being unpatentable over Schroder (Methods in Enzymology 1985 as cited in IDS 4/21/04) and Clark et al. (US 5,783,556, first cited 1/23/08).

Schroder teach (page 123 row 1) a composition comprising insulin and crystallized carbohydrate spheres (CCS) which is made from a solution of dextran T10.

Schroder does not expressly teach the composition with instructions as in claims 30,34 Clark teach compositions with insulin (claim 1). Clark further teach kits comprising insulin in which the insulin is in a container (i.e. a vessel) and in which instructions are provided (claim 39) (compare claims 30,34 of the instant invention).

Since Schroder teach the composition for delivery one would be motivated to obtain the composition in various forms for delivery, specifically including instructions for appropriate use and dosage. From the teachings of the references, it is apparent that one of ordinary skill in the art would have had a reasonable expectation of success in producing the claimed invention. Further, it is noted that Section 2112.01 III of the MPEP states that nonfunctional printed matter does not distinguish a claimed product from otherwise identical prior art product.

In relation to the recent KSR decision cited above, all the claimed elements were known in the prior art and one skilled in the art could have combined the elements as claimed by known methods with no change in their respective functions, and the combination would have yielded predictable results to one of ordinary skill in the art at the time of the invention. In particular, one would have been motivated to use the kit and instructions as taught by Clark (who also teaches insulin compositions) with the composition as taught by Schroder thereby meeting the limitations

of claims 30 and 34 of the instant invention. From the teachings of the references, it is apparent that one of ordinary skill in the art would have had a reasonable expectation of success in producing the claimed invention. Therefore, the invention as a whole was *prima facie* obvious to one of ordinary skill in the art at the time the invention was made, as evidenced by the references.

Taken together, Schroder teach (page 123 row 1) a composition comprising insulin and crystallized carbohydrate spheres (CCS) which is made from a solution of dextran T10. Thus Schroder teach the components (i.e. insulin and crystallized dextran microparticles) as recited in independent claims 43-45 of the instant invention. Schroder teach that the term crystallization is meant to include hydrogen, and van der Waals interactions, for example (page 119) as recited in claim 27 of the instant invention. Schroder teach aqueous solutions (page 121 last paragraph first sentence, page 122 first paragraph of release studies) as recited in claim 28 of the instant invention. Schroder teach administration via injection (Figure 3 and page 124 last paragraph), so a vessel (such as a syringe) and means is necessarily required thus meeting the limitations recited in claims 29,35 of the instant invention.

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Claim 43 recites that none of the insulin is encapsulated. the instant specification (section 0073) describes encapsulation as not acting as a shell. In the instant case, Schroder recognize pores in the polymer matrix (page 1173rd complete paragraph). Figure 1 (page 119) also shows that the crystalline polymer matrix has pores. Further, Schroder teach (Figure 2) that insulin is

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Since Schroder teach the composition for delivery one would be motivated to obtain the composition in various forms for delivery, specifically including instructions for appropriate use and dosage. From the teachings of the references, it is apparent that one of ordinary skill in the

art would have had a reasonable expectation of success in producing the claimed invention. Further, it is noted that Section 2112.01 III of the MPEP states that nonfunctional printed matter does not distinguish a claimed product from otherwise identical prior art product.

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Taken together, Schroder teach (page 123 row 1) a composition comprising insulin and crystallized carbohydrate spheres (CCS) which is made from a solution of dextran T10. Thus Schroder teach the components (i.e. insulin and crystallized dextran microparticles) as recited in independent claims 43-45 of the instant invention. Schroder teach that the term crystallization is meant to include hydrogen, and van der Waals interactions, for example (page 119) as recited in claim 27 of the instant invention. Schroder teach aqueous solutions (page 121 last paragraph first sentence, page 122 first paragraph of release studies) as recited in claim 28 of the instant invention. Schroder teach administration via injection (Figure 3 and page 124 last paragraph), so

a vessel (such as a syringe) and means is necessarily required thus meeting the limitations recited in claims 29,35 of the instant invention.

Although unclear (see 112 2nd) the term recombinant insulin has been interpreted such that the insulin is required to be some form of insulin since the definition (section 0070) refers to processing to another state. Schroder teach insulin. The Medline entry for the Schroder article lists the number 11061-68-0 as the registry number of the insulin (last line). The registry entry for 11061-68-0 recites that the name is human insulin (line 3). As such, Schroder teach human insulin. Since the structure of insulin is the same regardless of whether it is isolated or synthesized the insulin limitations of claims 43-51 are met. In the instant case Medline and Registry are cited as evidence of the identity of the insulin. It is noted that the source of human insulin does not alter the insulin sequence.Any amount has been interpreted as an effective amount. Further, the specification (section 0055) broadly defines effective amount. The term substantially has been given the broadest reasonable interpretation such that bonds can either be present or not be present. The phrase 'insulin is permeated' has been interpreted as a product-by-process step. The claims have been interpreted such that they include no new matter.

Claims 41,43, and 45, for example recite properties (porosity and microparticle diameter) that are not reported by Schroder. Please note, since the Office does not have the facilities for examining and comparing Applicants' composition with the composition of the prior art, the burden is on applicant to show a novel or unobvious difference between the claimed product and the product of the prior art. *See In re Best*, 562 F.2d 1252, 195 USPQ 430 (CCPA 1977) and *In re Fitzgerald*, 619 F.2d 67, 205 USPQ 594 (CCPA 1980), and "as a practical matter, the Patent Office is not equipped to manufacture products by the myriad of processes put before it and then

obtain prior art products and make physical comparisons therewith." *In re Brown*, 459 F.2d 531, 535, 173 USPQ 685, 688 (CCPA 1972). In the instant case, the claim product and prior art product are substantially identical in composition (i.e. comprise crystallized dextran and insulin) so a prima facie case of anticipation has been established (see MPEP section 2112.01 I).

Claim 43 recites that none of the insulin is encapsulated. the instant specification (section 0073) describes encapsulation as not acting as a shell. In the instant case, Schroder recognize pores in the polymer matrix (page 1173rd complete paragraph). Figure 1 (page 119) also shows that the crystalline polymer matrix has pores. Further, Schroder teach (Figure 2) that insulin is released over time. As such, the microparticles of Schroder do not act as shells since there are pores and the insulin is released over time.

Claims 44 and 45 refer to insulin in pores. In the instant case, Schroder recognize pores in the polymer matrix (page 1173rd complete paragraph). Figure 1 (page 119) also shows that the crystalline polymer matrix has pores. Further, Schroder teach (Figure 2) that insulin is released over time. Thus there is a reasonable basis that the claim limitations are met absence evidence to the contrary.

Response to Arguments 103

Since the claims have been amended, new rejections adapted to the claims are recited above. Applicants arguments will be considered to the extent that they apply to the current rejection and claim set.

Applicants argue (page 8-9) that Schroder does not teach compositions wherein none of the insulin is encapsulated.

Applicants argue that Schroder does not teach insulin permeated in pores.

Applicant's arguments filed 5/13/09 have been fully considered but they are not persuasive.

Although Applicants argue (page 8-9) that Schroder does not teach compositions wherein none of the insulin is encapsulated, the instant specification (section 0073) describes encapsulation as not acting as a shell. In the instant case, Schroder recognize pores in the polymer matrix (page 1173rd complete paragraph). Figure 1 (page 119) also shows that the crystalline polymer matrix has pores. Further, Schroder teach (Figure 2) that insulin is released over time. As such, the microparticles of Schroder do not act as shells since there are pores and the insulin is released over time. In comparison, an eggshell or other types of shells do not have pores sufficient for release over time. In other words to be encapsulated like that of a shell implies that there is no escape or release from the shell. Further, it is noted that the instant application (section 0074) teach that the methods of making are made by any suitable method. Since Schroder teach methods of making compositions comprising insulin and crystallized dextran, the products are necessarily the same absence evidence to the contrary (see MPEP section 2112.01). As such, there remains a sound basis that that the products of the prior art meet the limitations.

Although Applicants argue that Schroder does not teach insulin permeated in pores, as discussed above the claims are unclear (see 112 2nd). Section 2145 I of the MPEP states that arguments of counsel cannot take the place of evidence in the record. In the instant case, the prior art teach the same components, insulin and crystallized dextran, as in the instant claims. Since the Office does not have the facilities for examining and comparing Applicants' composition with the composition of the prior art, the burden is on applicant to show a novel or

unobvious difference between the claimed product and the product of the prior art. In the instant case, Schroder recognize that there are pores in the polymer matrix of certain microparticles (page 117 3rd complete paragraph). Further, Schroder teach (Figure 2) that insulin is released over time. As such, there is a reasonable basis that the claim limitations are met, absence evidence to the contrary. If the insulin is not in the pores, it is unclear where it would be. Further, it is noted that product by process claims (see MPEP section 2113) are only limited to the structure implied by the steps. In the instant case, claim 44 recites 'permeated in'. Since Schroder teach insulin in the microparticles the claim limitations are met absence evidence to the contrary.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to RONALD T. NIEBAUER whose telephone number is (571)270-3059. The examiner can normally be reached on Monday-Thursday, 7:30am-5:00pm, alt. Friday, EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Cecilia Tsang can be reached on 571-272-0562. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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